Habit Tracking App Abstract

Project Description

The goal of this project was designing a habit tracking application using object-oriented programming (OOP) principles. Before starting in building this project , I used several resources such as books and tutorials to learn the basic of Python and OOP . This Application Enables users to define , manages and track their habits on daily and weekly basis. It also provides them with analytics like longest streak of a habit or all habits

Conception

Before the coding process starts, the program has to be divided into classes , we did this using an UML diagram to understand how many classes we need to build and what are the interactions between them . The Diagram has help to minimize the risk of failure by providing a clear plan.

In the first try , I made only two Classes :

-Habit Class : that allow user to define a habit and store it´s characteristics like periodicity and date of start and end

- Habit tracker class : that is responsible in managing the habit , creating and deleting it, finding the habit by periodicity and saving it to the json file

After receiving the feedbacks I realised that I need to make another separate class called analytics , in this class I put the functions responsible of analytics like getting the streaks

Lessons learned

One of the things that I observed building this app , is that it is a better approach to write the test cases directly after writing the functions . it makes it a lot easier then doing it after you finish all the program and it prevent that you forget some functions . The most feature that I enjoyed building and most proud of is the command line interface . before learning programming and python one of my biggest question was how this lines of codes will be a program that a human being can interact with . and this cli has made it possible and easy .

Another thing that I learned from this project is the importance of visualising the structure of the code before beginning to code it . coding and classification will be much easier if I did the UML diagram the right way in the conception Phase .

Conclusion

In conclusion, I believe that this project successfully met its objective of creating a habit tracking application utilizing object-oriented programming principles with Python . What I learned from it is the importance of testing and to make a user friendly interface. Looking ahead, these insights will be applied in future projects to make the code more readable and understandable .

Also one of the important things is that never to assume that your code is complete , there is always a place for more feedbacks and improvement

Github Link : https://github.com/Rhhamma/IU_HabitTrackerApp.git